

Limb amputation for surgical management of grade two mast cell tumor on digit of labrador retriever

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ABSTRACT: The Labrador retriever came to My vets animal clinic Bumi Serpong Damai with mass on digit for a month. Punch biopsy procedure was performed to differentiate the type of the cells involved. The histological report diagnosed mast cell tumor grade 2. Mast cell tumors are one of the most common skin tumors in dogs, its account for approximately 20-25% of skin tumors in dogs. Mast cell tumors can be classified as grade 1, 2 and 3 by histological assesment. Hematology, blood chemistry, chest radiography and abdomen ultrasound were taken to evaluate metastasis possibility of the tumor and the results were normal. Mast cell tumors are corrected by surgical, and post-operative survival time is related to the degree of differentiation. Limb amputation was taken as an option to prevent the spread of tumor to the nearest lymph node, namely the axillary node.

Keywords:

limb amputation, labrador retriever, mast cell tumor.

INTRODUCTION

Mast cell is a tissue cell of the immune system of vertebrate animals. Mast cell precursors leave the bone marrow and migrate to various tissues throughout the body where they undergo differentiation into mature mast cells with their characteristic cytoplasmic granules. These granules contain a number of bioactive substances, including heparin, histamine, preformed tumor necrosis factor- α (TNF- α), and several proteases (London & Seguin 2003). Mast cells mediate inflammatory responses such as hypersensitivity and allergic reaction. Mast cell tumors (MCT) are one of the most common skin tumors in dogs, its account for approximately 20-25% of skin tumors in dogs. Brachicephalic breeds and retriever breeds are predisposed to this tumor (Dobson & Lascelles 2011). Its can affect skin and other area of the body including spleen, liver, gastrointestinal tract, and bone marrow. Mast cell tumors can be classified as grade 1, 2 and 3 by histological assesment. Grade 1 is MCT with well differentiated, grade 2 is MCT with moderately differentiated, and grade 3 is MCT with poorly differentiated. Differentiation is a determination of how much a particular tumor cell looks like a normal cell (Couto & Casanova 2013).

CASE

Anamnesa: The 5 years old male Labrador retriever came to My vets animal clinic Bumi Serpong Damai Tangerang Selatan with mass on digit for a month.

Physical examination: The dog was walking with his four legs. The dorsal and ventral right digit of forelimb has ery-

thema and edema lesion with alopecia. The lesion was not pain when being palpated. The regional lymph node had a normal size when was palpated (Figure 1).



Figure 1 The forelimb digit : (A) Dorsal view, (B) Ventral view.

Diagnosis: Evaluation of MCT can be done by a needle aspirate or biopsy. Punch biopsy procedure was performed in this case to differentiate the type of the cells involved. The histological report diagnosed mast cell tumor grade 2. Hematology and blood chemistry were performed to see the health status of the dog and the results were normal. Chest radiography and abdomen ultrasound were taken to evaluate metastasis possibility of the tumor and the results were normal.

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Treatment: Mast cell tumors are corrected by surgical, and post-operative survival time is related to the degree of differentiation. Grade 1 has a very low metastatic potential and can be cured by surgical resection alone. Grade 2 and 3 have a higher metastatic potential and greater risk of spreading (Couto & Casanova 2013). Limb amputation was taken as an option to prevent the spread of tumor to the nearest lymph node, namely the axillary node.



Figure 3 Right forelimb wound healing post amputation.

■ CONCLUSION

Mast cell tumors (MCT) are a tumor type of blood cell normally involved in the body's response to allergen and inflammation. Mast cell tumors are corrected by surgical. Limb amputation was taken as an option to prevent the spread of tumor to the nearest lymph node, namely the axillary node.

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